



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/662,047

09/12/2003

Juhani Martti

2542-00045

8316

26753

7590

12/01/2004

ANDRUS, SCEALES, STARKE & SAWALL, LLP
100 EAST WISCONSIN AVENUE, SUITE 1100
MILWAUKEE, WI 53202

EXAMINER

THOMAS, COURTNEY D

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,047

Applicant(s)

MARTTI ET AL.

Examiner

Courtney Thomas

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1 and 2 are objected to because of the following informalities:
2. Claim 1, line 15 recites: "...various position..." Examiner suggests the phrase be rewritten as --various positions --.
3. Claim 2, lines 2-3 recite: "... the inner profile thereof..." Examiner suggests the phrase be rewritten as -- ~~the~~ an inner profile ~~thereof~~-- to avoid antecedence problems.
4. Claim 2, line 5 recites: "... the outer profile..." Examiner suggests the phrase be rewritten as -- ~~the~~ an outer profile -- to avoid antecedence problems.
5. Claim 2, line 3 recites: "... the bottom thereof..." Examiner notes there is no antecedent basis for the use of the term "the bottom."
6. Claim 2, line 9 recites: "...the longitudinal direction thereof." Examiner suggests the phrase be re-written as follows: "...~~the~~ a longitudinal direction ~~thereof~~."
7. The claims have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the claims.
8. Appropriate correction is required.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eitner et al. (U.S. Patent 4,893,321) in view of Dube et al. (U.S. Patent 6,434,329).

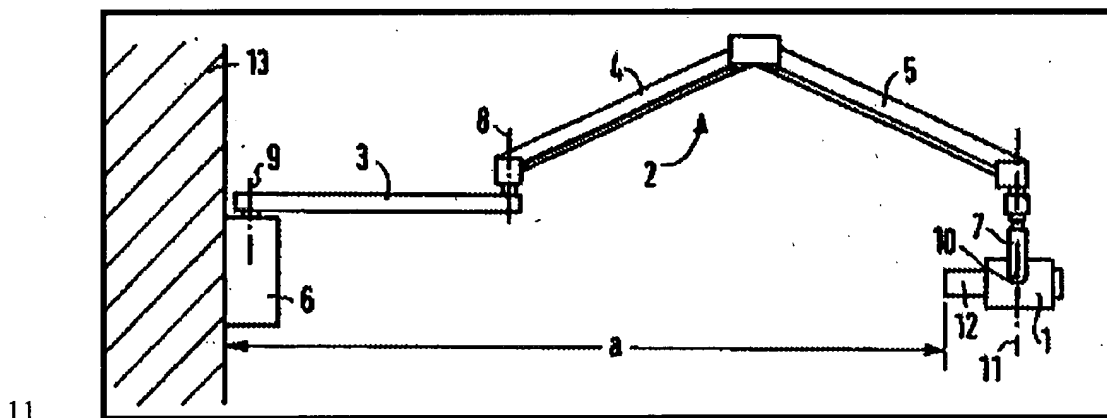
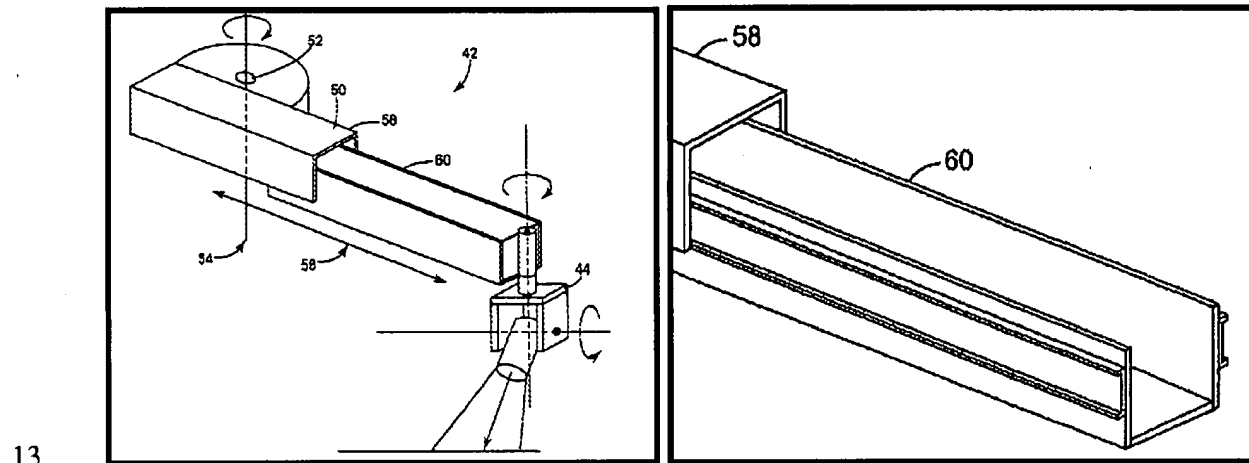


Figure 1 – U.S. Patent 4,893,321 to Eitner et al.

12. As per claim 1, Eitner et al. disclose an X-ray apparatus for intra-oral imaging applications comprising: a linkage mounted on a support structure (6), to which is connected an X-ray source (1), the linkage comprising: a first arm member (3), articulated to the support structure and adapted to be pivotable around a substantially vertical axis (9), a second arm member (4), connected to the end of the first arm member spaced from the support structure and adapted to be pivotable around a substantially vertical axis (8) and horizontal axis (column 3, lines 48-53) and a third arm member (5) connected to the opposite end of the second arm member and adapted to be pivotable around a substantially horizontal axis, the unsupported end

Art Unit: 2882

of the third arm member having the X-ray source mounted thereon with an articulate joint (7) which allows pivoting of the X-ray source to various positions (column 3, lines 56-66). Eitner et al. do not explicitly disclose an X-ray apparatus wherein the first arm member (3) is designed to be adjustable regarding its length.



Figs. 8 & 9 (enlarged portion) - U.S. Patent 6,434,329 to Dube et al.

14. Dube et al. disclose a system comprising a first arm (50) designed to be adjustable regarding its length (56); the first arm member comprising two telescopically fitted, substantially rectangular profiles (58, 60); the inner profile (60) having its two opposite outside surfaces formed with recesses lengthwise of the profile; the outer profile (58) having its inside surface formed with inward protrusions complimentary to the recesses (column 6, lines 29-34). Dube et al. teach that an advantage of such a configuration is an ability to radially displace a mounted device, thereby enabling greater device mobility within an operating environment (Abstract; Fig. 8 above; see also column 4, lines 42-53).

15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the X-ray apparatus of Eitner et al. such that it incorporated a first arm configured for adjustability regarding its length. One would have been motivated to make such a

Art Unit: 2882

modification for the purpose of controlling the position of the X-ray source to minimize collisions and/or contacts with medical equipment or staff members while allowing displacement of the source to obtain positional data from a patient as suggested by Dube et al. (column 4, lines 42-53).

16. **As per claims 2-4**, Eitner et al. as modified above, disclose an X-ray apparatus as recited in claim 1, but do not explicitly disclose an X-ray apparatus having an inner profile having T-slots; an outer profile, provided with fastening through holes for passage of fastening elements from the outside profiles' outside surface to the T-slot for locking the profiles in a desired relative position in a longitudinal direction; wherein the outer profile has its outside surface provided with a lengthwise recess complimentary to the inner profile's outside surface; wherein the recesses in the inner and outer profiles are provided with a cover.

17. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the X-ray apparatus of Eitner et al. such that it incorporated the aforementioned limitations. One would have been motivated to make such modifications for the purposes of a) improving the structural rigidity of the disclosed first arm member by providing an inner profile with shaped slots and covers to enhance connectivity with a complementary outer profile and b) improving position-ability of the apparatus by including fastening elements to secure a desired arm length subsequent any length adjustments, as suggested by Dube et al. (column 4, lines 42-53; column 6, lines 29-38; column 10, lines 31-37).

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: **U.S. Design Patent 290,500** to Makas et al. illustrates a Dental X-ray Unit comprising features claimed by applicants.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (571) 272-2496. The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272 2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Courtney Thomas
Courtney Thomas
Examiner
Art Unit 2882